

## **Remarks**

The above Amendments and these Remarks are in reply to the Office Action mailed April 20, 2005. Claims 1-24 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-24. The present Response amends claims 1, 4, 6, 11, 18 and 21, and cancels claim 3, leaving for the Examiner's present consideration claims 1, 2, and 4-24. Reconsideration of the rejections is requested.

### **I. OBJECTION TO THE ABSTRACT**

The Examiner objected to the abstract of the disclosure because "on line 2, 'maker-zones' should be 'marker-zones' to be consistent with the rest of the specification disclosure." See OA, page 2, number 2. Applicants have amended the abstract in accordance with the Examiner's suggestion, and assert that the abstract is no longer objectionable. Applicants therefore request that the objection to the disclosure be withdrawn.

### **II. OBJECTION TO THE SPECIFICATION – LACK OF SUMMARY**

The Examiner objected to the disclosure because "there is no summary section in the specification disclosure." See OA, page 2, number 3. Applicants have amended the specification to include a Summary of Invention paragraph. Applicants therefore request that the objection to the disclosure be withdrawn.

### **III. OBJECTION TO THE SPECIFICATION**

The Examiner objected to the disclosure because "on page 4...the same number 130 is repeatedly used for identifying different elements, namely, rotary actuator and ramp." See OA, page 2, number 4. Applicants have amended the specification to correct the reference numbers. Applicants assert that all known clerical errors have been corrected, and therefore the specification is no longer objectionable. Applicants therefore request that the objection to the disclosure be withdrawn.

### **IV. SUBMISSION OF CORRECTED DRAWINGS**

The Examiner advised that "new corrected drawings..are required in this application because in figure 3, it contains informal handwriting illustrations." See OA, page 2, number 6. Applicants request

that replacement drawing sheet 3 be substituted for sheet 3 as originally filed. No new matter has been added and Applicants request that the replacement drawings sheet be accepted.

**V. OBJECTION TO THE CLAIMS**

***Claim 21***

The Examiner objected to claim 21 because of the following informalities: “on line 1, ‘if’ should be ‘of’ to be consistent with the rest of claims.” See OA, page 3, number 7. Applicants have amended claim 21 in accordance with the Examiner’s suggestion, and believe that the claim is no longer objectionable. Applicants therefore request that the objection to claim 21 be withdrawn.

**VI. REJECTION UNDER 35 U.S.C. §102(E) OVER *MORAN ET AL.* (U.S. PAT. NO. 6,738,205)**

***Claims 1-24***

The Examiner rejected claims 1-24 under 35 U.S.C. § 102(e) as being anticipated by *Moran*. Applicants request cancellation of claim 3. Applicants respectfully traverse the rejection of claims 1, 2 and 4-24.

In the Office Action, the Examiner writes that regarding claim 1, *Moran* discloses “a marker-zone to determine a position of a head on a printed media...comprising: one or more edges defined by a radial transition from a presence of a transition-pair to an absence of the transition-pair (see figure 9A...the edges of segments 51 and 52 defined by radial transition...wherein at least on of the one or more edges is located at a radial position...” See OA, page 4. However, nowhere does *Moran* disclose “a transition-pair...wherein the transition-pair is arranged substantially perpendicular to the head at a location radially coincident with the head when the head is disposed over the transition-pair; an edge defined by a radial transition from a presence of the transition-pair to an absence of the transition-pair; wherein the edge defines a gross radial position” as recited in claim 2. Referring to FIG. 9A, *Moran* describes a plurality of *slanted* segments 52 and suppressed segments 51 arranged at an acute relative to the head 34. This arrangement restricts a width of the segments 51,52 and therefore restricts the distance over which the chevron can define a position of the head. *Moran* therefore cannot anticipate claim 2 under 35 U.S.C. § 102(e).

Further, the Examiner writes that regarding claim 4, *Moran* discloses “a template pattern...comprising...a plurality of pulses ...wherein at least one of the plurality of pulses includes a gap such that the pulse is discontinuous...and wherein the position is determined by a location of the head

relative to the gap (see column 9...relative radial position of the head 34 within a band defined by the extent of a slanted segment 52 can be determined by measuring a differential time gap  $\Delta(t)$  between passage of a trailing edge...and arrival of a leading edge...)." See OA, page 6. However, nowhere does *Moran* disclose "a plurality of pulses...arranged generally perpendicular to a direction of travel of the head...wherein at least one...of the plurality of pulses includes a gap such that the pulse is radially discontinuous ...wherein the gap includes an edge defined by a radial transition from a presence of the pulse to an absence of the pulse...the position is determined by a location of said head relative to the edge." as recited in claim 4. Referring to FIG. 5A of *Moran*, a gap  $\Delta(t)$  describes a circumferential gap between two features (for example the slanted segment **52** and the timing segment **50**), and not a gap such that the pulse is radially discontinuous. The distinction is significant in that the position measurement of *Moran* is dependent on measuring a varying gap, while the position measurement of claim 4 is defined merely by the presence or absence of the pulse. *Moran* therefore does not disclose all of the limitations of claim 4, and cannot anticipate claim 4 under 35 U.S.C. § 102(e).

Further, the Examiner writes that regarding claims 11 and 18, *Moran* discloses "a pattern...comprising (having)...a plurality of pulses...at least one of the plurality of pulses includes (including) a gap such that the pulse is discontinuous...wherein the position is determined by a location of the head relative to the gap (see column 9...relative radial position of the head 34 within a band defined by the extent of a slanted segment 52 can be determined by measuring a differential time gap  $\Delta(t)$  between passage of a trailing edge...and arrival of a leading edge...)." See OA, pp 7-8 and 9-11. However, nowhere does *Moran* disclose "a plurality of pulses...one...including a gap such that the pulse is radially discontinuous; wherein the gap includes an edge defined by a radial transition from a presence of the pulse to an absence of the pulse...wherein said position is determined by a location of said head relative to the edge" as recited in claims 11 and 18. Claims 11 and 18 require that a position be determined by the edge of the gap, and the gap is defined as being a radial discontinuity of a pulse. The gap in *Moran*, as defined by the Examiner, is a circumferential gap between two features – a slanted segment **52** and a timing segment **50**. Nowhere does *Moran* disclose the features of claims 11 and 18, as recited. The distinction is significant in that the position measurement of *Moran* is dependent on measuring a varying gap, while the position measurement of claims 11 and 18 is defined merely by the presence or absence of the pulse. *Moran* therefore does not disclose all of the limitations of claims 11 and 18, and cannot anticipate claims 11 and 18 under 35 U.S.C. § 102(e).

Since *Moran* fails to disclose all of the features of claims 1, 4, 11 and 18, *Moran* cannot anticipate claims 1, 4, 11 and 18 under 35 U.S.C. § 102(e). Dependent claims have at least the features of the independent claims from which they depend; therefore, claim 2 (which depends from claim 1), claims 5-10 (which ultimately depend from claim 4), claims 12-17 (which ultimately depend from claim 11), and claims 19-24 (which ultimately depend from claim 18) cannot be anticipated by *Moran* under 35 U.S.C. § 102(e). Accordingly, Applicants respectfully request withdrawal of the rejection.


## VII. CONCLUSION

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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